

### NOMENCLATURAL NOTES FOR THE NORTH AMERICAN FLORA. III.

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#### ABSTRACT

Authorship of the following names is discussed: *CyclospERMUM leptophyllum*, *Helianthus pauciflorus* Nutt. ssp. *subrhomboideus*, and *Lomatium macrocarpum*. The names *Luzula multiflora* (Ehrh.) Hoffm. var. *kobayasi* (Satake) Samuelsson and *Viola bicolor* Pursh are accepted as being correct. The name *Luzula multiflora* var. *contracta* is validated by the provision of a Latin diagnosis. One new combination is proposed: *Platanthera zothecina* comb. nov.

KEY WORDS: Floristics, nomenclature, North America. Apiaceae. Asteraceae. Juncaceae. Orchidaceae. Violaceae.

#### INTRODUCTION

Continuing with the "Nomenclatural notes for the North American Flora. I and II" (Kartesz & Gandhi 1989a, 1989b), a third note in the series is presented here toward the advancement of our understanding of North American plants.

#### APIACEAE

##### *CyclospERMUM leptophyllum*

The name *CyclospERMUM leptophyllum*, for the pantropical, European weed, was proposed by Sprague (J. Bot. 61:131. 1823) as a new combination based on *Pimpinella leptophyllum* Pers. The authorship of this new combination has generally been attributed to "(Pers.) Sprague" (Liogier & Martorell 1982;

Howard 1989; Constance & Affolter 1990). When Sprague proposed the above combination, he stated that his new combination is for those "who follow Lagasca and Calestani in treating *Pimpinella leptophylla* Pers. as the type of an independent genus" (i.e., *Cyclospermum*). On the same page, Sprague chose to accept the name *Apium leptophyllum* and cited his new combination as a synonym for it. Since Sprague did not accept his new combination, he cannot be the author of the name (Art. 34.1; Greuter 1988). Therefore, the first to use and accept the new combination *C. leptophyllum* in publication, automatically validates it. In reviewing the pertinent literature, Britton & Wilson (1925) appear to have been the first to do so, and thus, validate the new combination. Although 102 years passed between the publications of Sprague and of Britton & Wilson, no earlier publication is known to have used the name; hence, we conclude that Britton & Wilson must be credited for the new combination. Regarding the authorship of the new combination *A. leptophyllum*, some workers (e.g., Constance & Affolter 1990) believe that F. Mueller must be credited as the combining author. However, Bentham (1863; p. 12) clearly stated that "I alone am therefore responsible for the details of this work." The bibliographical references are provided below:

*Cyclospermum leptophyllum* (Pers.) Sprague ex Britton & Wilson, Bot. Porto Rico 6:52. 1925. *Cyclospermum leptophyllum* (Pers.) Sprague, J. Bot. 61:131. 1823, (*nomen invalid.*). BASIONYM: *Pimpinella leptophylla* Pers., *Syn. Pl.* 1:324. 1805. *Apium leptophyllum* (Pers.) F. Muell. ex Benth., *Fl. Australia* 3:372. 1867.

### *Lomatium macrocarpum*

Torrey & Gray (1840) described *Peucedanum macrocarpum* and attributed the name to Nuttall. They cited *Ferula macrocarpa* Hook. & Arn. (1839) with a "?" mark, in synonymy. Obviously, this citation has led some workers to believe that *Ferula macrocarpa* is the basionym for *P. macrocarpum*. Coulter & Rose (Contr. U.S. Natl. Herb. 7:217. 1900) transferred *P. macrocarpum* to the genus *Lomatium* and cited *P. macrocarpum* Nuttall (from Torrey & Gray), but did not make a reference to Hooker & Arnott.

Regarding Coulter & Rose's new combination (*Lomatium macrocarpum*), Hiroe (1979) cited "Hook. & Arn." as the parenthetical authors, rather than Torrey & Gray. It is possible that Hiroe assumed that Coulter & Rose indirectly cited Hooker & Arnott, by citing Torrey & Gray, who had mentioned Hooker & Arnott in synonymy. To help clarify the situation, we quote from Torrey & Gray: "We have described this plant from specimens collected by Mr. Nuttall. It may not be identical with *Ferula macrocarpa* H. & A." It is evident from the above statement that the type specimen for *Peucedanum*

*macrocarpum* is that of Nuttall (on deposit in PH, as per Coulter & Rose), but not that of *F. macrocarpa*. Thus, the name *P. macrocarpum* cannot be considered as a new combination, but rather a name dating from 1840. Hence, the correct author citation for *P. macrocarpum* is: Nutt. ex Torrey & A. Gray. Since Coulter & Rose did not refer to Hooker & Arnott, but rather cited *P. macrocarpum* Nutt. as the basionym, the correct author citation for *L. macrocarpum* is: "(Nutt. ex Torrey & A. Gray) Coult. & Rose."

Although *Ferula macrocarpa* is the oldest name in this species complex, it cannot be transferred to *Lomatium*, since it would create a later homonym of *L. macrocarpum* (Nutt. ex Torrey & A. Gray) Coult. & Rose.

*Lomatium macrocarpum* (Nutt. ex Torrey & A. Gray) Coult. & Rose, Contr. U.S. Natl. Herb. 7:217. 1900. *Peucedanum macrocarpum* Nutt. ex Torrey & A. Gray, *Fl. N. Amer.* 1:627. 1840.

*Ferula macrocarpa* Hook. & Arn., *Bot. Beechey Voy.* 348. 1839.

## ASTERACEAE

### *Helianthus*

The new combination *Helianthus pauciflorus* Nutt. ssp. *subrhomboideus* (Rydb.) Spring & E. Schilling (*Biochem. Syst. Ecol.* 18(1):22. Mar 1990) predates *H. pauciflorus* ssp. *subrhomboideus* (Rydb.) Kartesz & Gandhi (*Phytologia* 68(6):423. Jun 1990) and renders the latter to be superfluous. The March issue of *Biochemical Systematics & Ecology* was received in May 1990 at UNC-Botany Library, and by this time, our article in *Phytologia* was already in press. Nevertheless, we regret the oversight and correct the subspecies authorship to: (Rydb.) Spring & E. Schilling.

## JUNCACEAE

### *Luzula multiflora* complex

The epithet *contracta*, in the *Luzula multiflora* (Ehrh.) Lej. complex, most likely appeared first at the rank of forma, in the protologue of *L. multiflora* var. *frigida* (Buches.) Samuelsson (Hultén 1937; Pp. 134, 135). The epithet *contracta*, although effectively published, was invalid. Bocher (1938; p. 248), in his treatment of *L. frigida* (Buches.) Samuelsson, remarked that the var. *contracta* was the most widespread form. However, the name was not validated by him.

Bocher (1950; p. 11) stated that there was "no description of the variety *contracta* available." Likewise, Scoggan (1957) stated that "Var. *contracta* Sam. is the form represented in Manitoba, . . . , this entity was never officially described." Although Bocher used the name *Luzula multiflora* ssp. *frigida* (Buches.) Krecz. var. *contracta* Samuelsson and included it in a key on p. 17, no Latin diagnosis was provided, which is a requirement for validation of names published after 1 Jan 1935 (Art. 36.1). The same situation exists in Bocher, *et al.* (1957; 1968) and in Porsild (1957). Hence, to this date, the varietal name remains invalid for the lack of a Latin diagnosis. We provide a Latin diagnosis under the varietal epithet *contracta* for its validation.

For the North American flora (north of México), we assign the following to the *L. multiflora* complex.

*Luzula multiflora* (Ehrh.) Lej., *Fl. Env. Spa.* 1:169. 1811.

*Luzula multiflora* (Ehrh.) Lej. ssp. *frigida* (Buch.) Krecz., *Bot. Zur.* 12:490. 1928. BASIONYM: *Luzula campestris* (L.) DC. var. *frigida* Buch., *Oestr. Bot. Z.* 48:284. 1898. *Luzula multiflora* var. *frigida* (Buch.) Samuelsson in Hultén, *Fl. Aleut. Isl.*, ed. 1. 125. 1931.

*Luzula multiflora* (Ehrh.) Lej. ssp. *multiflora* var. *multiflora*. BASIONYM: *Juncus campestris* L. var. *multiflorus* Ehrh., *Beitr. Naturk.* 5:14. 1790. *Juncus multiflorus* (Ehrh.) Hoffm., *Deutschl. Fl.*, rev. ed. 1:169. 1800. *non* Retz. 1795.

*Luzula multiflora* (Ehrh.) Lej. ssp. *multiflora* var. *contracta* Samuelsson *ex* Kartesz & Gandhi, var. *nov.* LECTOTYPE: t. 2, f. 2. in T.W. Bocher, *Contr. Fl. Pl. Geog. W. Greenland II.* 1950.

*L. multiflorae* (Ehrh.) Lej. var. *frigidae* (Buch.) Samuelsson similis sed differt inflorescentia capituli solitarii, aut si capitula plures. nunc uno plerumque ementi super cetera. Plantae caespitosae; culmi castanei rigidi validique; folia comparata angusta, planae trichomatibus candidis molibusque secus margines; capitula fusca, globularibusque; segmenta perianthiorum 2.5-3.5 mm longa; fructus quam periantha fere longiores; semina 1.1-1.4 mm longa. (Latin translation is based on Bocher's [1950] and Porsild's [1957] treatment of this taxon.)

Plants tufted; culms dark brown, stout and stiff; leaves flat with soft white hairs along the margins; inflorescence of a solitary dark reddish brown globular head or if of several heads, then one (head) usually projecting above the others; perianth segments 2.5-3.5 mm long; fruits almost as long as perianth; seeds 1.1-1.4 mm long.

*Luzula multiflora* (Ehrh.) Lej. ssp. *multiflora* var. *kjellmannioides* Taylor & MacBryde, *Canad. J. Bot.* 56:191. 1978. *Luzula kjellmanniana* auct. non Miyabe & Kudo, 1913. *Luzula multiflora* var. *kjellmanniana* sensu Samuelsson in Hultén, *Fl. Aleut. Isl.*, ed. 1. 127. 1937. (excl. type).

*Luzula multiflora* (Ehrh.) Lej. ssp. *multiflora* var. *kobayasii* (Satake) Samuelsson in Hultén, *Fl. Aleut. Isl.*, ed. 1. 126. 1937. **BA-SYNONYM:** *Luzula kobayasii* Satake var. *kobayasii*, automatically created by *L. kobayasu* var. *minor* Satake, 1932.

*Luzula kobayasii* Satake var. *minor* Satake, *Bot. Mag. (Tokyo)* 46:186. 1932. *Luzula multiflora* var. *minor* (Satake) Taylor & MacBryde, *Canad. J. Bot.* 56:191. 1978.

## ORCHIDACEAE

### *Platanthera*

L. Higgins & S. Welsh (in Welsh, *Great Basin Naturalist* 46:259. 1986) described a new orchid species, endemic to Utah: *Habenaria zothecina* Higgins & Welsh. From their treatment, it is clear that both authors recognize the genus *Habenaria* Willd. sens. lato, which includes several generic segregates, such as *Coeloglossum* Hartman, *Piperia* Rydb., and *Platanthera* L.C. Rich. C. Luer (1975), in his treatment of United States orchids, remarked as follows: "No true *Habenaria* is found north of the southeasternmost region of the US . . ." What have been known as habenarias from other regions of the U.S., were assigned to the genus *Platanthera* by him. We summarize his assessment of these two genera below.

*Habenaria*: primarily tropical in distribution; tubers or corms present; leaves more than 2; flowers small; corolla lip often tripartite into linear divisions; stigmatic processes conspicuous.

*Platanthera*: mostly temperate in distribution; generally stem tubers or corms absent; leaves 1 or more; flowers small or medium sized; corolla lip entire, divided, or fringed; stigmatic processes absent, rudimentary, or inconspicuous.

Weber (1989) transferred *Habenaria zothecina* to the genus *Limnorchis* Rydb. and made a new combination. Luer treated *Limnorchis* as a section of *Platanthera*. For the North American flora, we follow Luer's treatment, and thus, transfer Higgins & Welsh's species to *Platanthera*, and propose the following new combination.

**Platanthera zothecina** (Higgins & Welsh) Kartesz & Gandhi, *comb. nov.*  
 BASIONYM: *Habenaria zothecina* Higgins & Welsh in Welsh, Great  
 Basin Naturalist 46:259. 1986. *Limnorchis zothecina* (Higgins & Welsh)  
 W.A. Weber, Phytologia 67(6):427. 1989.

## VIOLACEAE

### *Viola bicolor*

For the American representative of the Old World pansy group of violets, Greene (Pittonia 4:9. 1899) proposed the name *Viola rafinesquii* to replace the name *V. tenella* Raf. (Amer. M. Mag. 4:191. 1819, *non* Poir. 1810). Greene cited two other synonyms: *V. arvensis* sensu Ell. (1817), *non* Murray (1770) and *V. bicolor* Pursh (1814). Greene considered Pursh's name to be a later homonym of Gilibert (1782).

Although Greene's rejection of *Viola bicolor* Pursh and *V. tenella* Raf. was appropriate at his time, his rejection of *V. bicolor* does not conform with the present International Code of Botanical Nomenclature (ICBN). Gilibert did not consistently employ the Linnaean system of binary nomenclature for species in his works. As per ICBN Art. 23.6C, epithets in such works must be rejected. Example 11 of this article, cites Gilibert's *Fl. Lit. Inch.* (1781) for rejection. The invalidity of names in Gilibert's Floras of Lithuania was also explicitly demonstrated by McVaugh (1949).

Since *Viola bicolor* Gilibert does not have nomenclatural standing, it does not render *V. bicolor* Pursh a later homonym. In this connection, Dr. L.E. Brown brought to our attention, Shinnery's 1961 publication on the nomenclature of *V. bicolor*. Shinnery indicated that Hoffmann (1804; p. 170) described *V. bicolor* in the protologue of *V. tricolor* L. Shinnery believed that the name "*V. bicolor* Hoffm." was validly published and concluded that it renders *V. bicolor* Pursh to be a later homonym. Shinnery, therefore accepted the name *V. rafinesquii* and also mentioned that the name "*V. bicolor* Hoffm." was not listed in *Index Kewensis*. It has not been listed in *Index Kewensis* to date.

On verification, we found that Hoffmann (1804) numbered each of his accepted taxa, which has been a widespread custom of various workers both historically and presently. With reference to the genus *Viola*, we found nine species numbered. Although eight of these nine species were described in Linnaeus' *Species Plantarum*, only three species were referred to Linnaeus by Hoffmann; for the remaining five species, such as *Viola tricolor* (number 9), Hoffmann did not cite Linnaeus in reference.

It is clear from Hoffmann's work that the type font of the descriptions of all accepted taxa was slightly larger than the type font of the subsequent

discussion portions. In the last two paragraphs of the protologue of *Viola tricolor*, Hoffmann included the names *V. bicolor* and *V. arvensis*. He neither cited authorship of these two names nor numbered them, but he did provide descriptions. The smaller type font used for *V. bicolor* is suggestive of a discussion, whereas the relatively larger type font used for *V. arvensis* is suggestive of the description of an accepted taxon. We are not certain whether Hoffmann was aware of "*V. bicolor* Gilib." and *V. arvensis* Murr. (1770). If Hoffmann intended to describe *V. arvensis* as a new species, then there is the possibility that he inadvertently failed to number it. However, in the past (Bentham 1892; Jackson 1895), *V. arvensis* was treated as a synonym, as a form, or as a variety of *V. tricolor*. With reference to *V. bicolor*, Persoon (1805) proposed the new combination: *V. tricolor* var. *bicolor* Pers., which was based on *V. bicolor* Hoffm., whereas Jackson mentioned *V. bicolor* as being a synonym of *V. tricolor*.

Since Hoffmann did not number the name *Viola bicolor*, its inclusion in the protologue of *V. tricolor* could be interpreted as being a described name in synonymy (*pro syn.*; Rec. 50A) or as a provisional name (Art. 34.1), or both; however, none of these can be considered as valid publication. Hence, we conclude that neither Gilibert nor Hoffmann validly published the name *V. bicolor*. Persoon's (1805) usage of this epithet at varietal status does not alter the nomenclature. Until it can be shown that someone validly used the name *V. bicolor* prior to Pursh, we should continue to accept *V. bicolor* Pursh to be the correct name for the species. With this disposition, we accept the name *V. bicolor* Pursh and provide the following references.

*Viola bicolor* Pursh, *Fl. Sept. Amer.* 175. 1814, non Gilib. (1781 [*nom. rej.*]), nec Hoffm. (1804 [*pro syn.* and/or provisional name: *nom. invalid.*]). *Viola rafinesquii* E. Greene, *Pittonia* 4:9. 1899. *Viola kitaibeliana* Roemer & Schult. var. *rafinesquii* (E. Greene) Fernald, *Rhodora* 40:443. 1938.

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